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College of Veterinary Medicine

VETERINARY CONTINUING EDUCATION

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What is Crohn's Disease?

Crohn's disease is a chronic granulomatous ileocolitis of humans; its etiologic origin is unknown.

Crohn's disease generally affects patients during the prime of life (teens to early twenties).

Patients suffer with chronic weight loss, abdominal pain, diarrhea or constipation (obstruction), vomiting and generalized malaise.

Seventy to eighty percent of patients with Crohn's disease undergo surgical resection of the diseased intestine as a result of complications.

Most patients (approximately 80%) suffer recurrences and require further surgical procedures.

Medical treatment is supportive at best and involves symptomatic treatment with steroidal anti-inflammatory drugs, immunosuppressives and antidiarrheals.

Patients afflicted with this disorder generally live with chronic pain throughout their lives. Most patients describe their quality of life as poor.

Why has it been hypothesized that there is an association between Mycobacterium paratuberculosis and Crohn's disease?

The current hypothesis that a possible etiologic association exists between M. paratuberculosis and Crohn's disease arose from several publications in 1984 that reported the isolation of Mycobacterium paratuberculosis from three patients with Crohn's disease but not from controls.

During the last 13 years, the possible link between M. paratuberculosis and Crohn's disease has been investigated with variable findings.
What data supports an association between *Mycobacterium paratuberculosis* and Crohn's disease?

- Cultivation of *Mycobacterium paratuberculosis* from some patients with Crohn's disease
- Ability of human isolates to cause disease in experimental animals
- Detection of IS900 in a subpopulation of patients with Crohn's disease

What data refutes an association between *Mycobacterium paratuberculosis* and Crohn's disease?

- Lack of pathologic hallmark (acid-fast bacilli)
- Low cultivation success
- Variability in PCR data
- Detection of IS900 in controls

Does commercial pasteurization destroy *Mycobacterium paratuberculosis* in milk?

Studies have shown *Mycobacterium paratuberculosis* is shed in milk and colostrum of both clinically and subclinically infected cows.

Five studies have been completed on the ability of pasteurization to destroy *Mycobacterium paratuberculosis*.

Two of the studies used a lab-scale pasteurizer to simulate commercial pasteurization. In these two studies *Mycobacterium paratuberculosis* was destroyed completely at a time and temperature combination simulating commercial pasteurization.

Conclusions

Scientific evidence is not available to answer the question "Does *Mycobacterium paratuberculosis* cause Crohn's disease in humans?"

Research indicates that *Mycobacterium paratuberculosis* is destroyed under laboratory conditions simulating commercial pasteurization.
References


